



LEED

HOW VITRITURF CAN CONTRIBUTE TO OBTAINING LEED CREDITS.

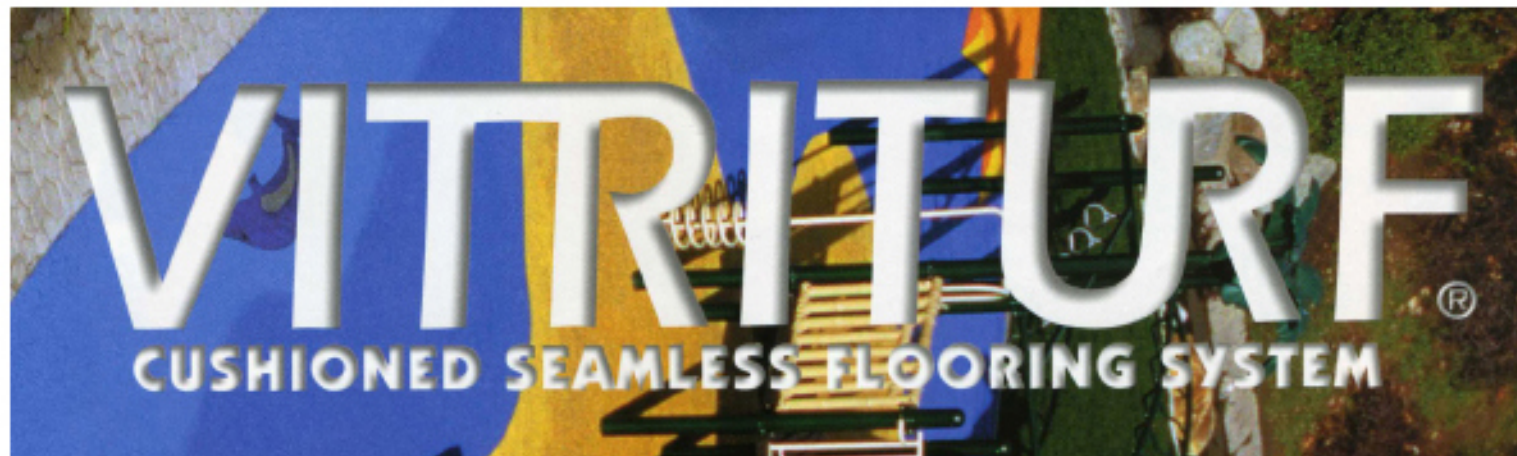
THE LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) GREEN BUILDING RATING SYSTEM REPRESENTS THE U.S. GREEN BUILDING COUNCIL'S EFFORT TO PROVIDE A NATIONAL STANDARD FOR WHAT CONSTITUTES A GREEN BUILDING. IT IS UTILIZED AS A DESIGN GUIDELINE AND CERTIFICATION TOOL FOR ARCHITECTS AND DESIGNERS SEEKING TO DEVELOP HIGH PERFORMANCE, SUSTAINABLE BUILDINGS.

LEED VERSION 2.2 IS AN UPDATED VERSION OF THE RATING SYSTEM FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS (LEED-NC). IT IS DESIGNED TO GUIDE AND DISTINGUISH HIGH PERFORMANCE COMMERCIAL AND INSTITUTIONAL PROJECTS.

THE RATING SYSTEM DEFINES THE REQUIREMENTS, BY CATEGORY, TO ACHIEVE EACH PREREQUISITE AND VOLUNTARY POINT. PROJECTS CAN EARN ONE OR MORE POINTS TOWARD CERTIFICATION BY MEETING OR EXCEEDING EACH CREDIT'S TECHNICAL REQUIREMENTS. POINTS COMPUTE TO A FINAL SCORE THAT RELATES TO ONE OF FOUR POSSIBLE LEVELS OF CERTIFICATION.

HANOVER SPECIALTIES INC'S VITRITURF SYSTEMS ARE DESIGNED TO MEET STRINGENT CRITERIA REQUIRED TO EARN POINTS UNDER 2 OUT OF 6 CATEGORIES OF LEED-NC. BASED ON THIS CRITERIA,VITRITURF SYSTEMS CAN ASSIST ARCHITECTS AND DESIGNERS IN OBTAINING 7 (SEVEN) POINTS TOWARD LEED CERTIFICATION.





LEED-NC CREDIT AREAS IMPACTED BY VITRITURF

CATEGORY-MATERIALS & RESOURCES

CREDIT TITLE-CONSTRUCTION WASTE MANAGEMENT

CREDIT NUMBER-MR 2.1 NUMBER OF POINTS-1

CREDIT NUMBER-MR 2.2 NUMBER OF POINTS-1

CREDIT TITLE-RECYCLED CONTENT

CREDIT NUMBER-MR 4.1 NUMBER OF POINTS-1

CREDIT NUMBER-MR 4.2 NUMBER OF POINTS-1

CREDIT TITLE-LOCAL/REGIONAL MATERIALS

CREDIT NUMBER-MR 5.1 NUMBER OF POINTS-1

CREDIT NUMBER-MR 5.2 NUMBER OF POINTS-1





LEED-NC: MATERIALS AND RESOURCES

CONSTRUCTION WASTE MANGEMENT

DEFINITION OF LEED-NC CREDITS MR 2.1 & MR 2.2

MR 2.1 (1 POINT)

RECYCLE AND/OR SALVAGE AT LEAST 50% OF NON HAZARDOUS CONSTRUCTION AND DEMOLITION DEBRIS. DEVELOP AND IMPLEMENT A CONSTRUCTION WASTE MANAGEMENT PLAN THAT, AT A MINIMUM, IDENTIFIES THE MATERIALS TO BE DIVERTED FROM DISPOSAL AND WHETHER THE MATERIALS WILL BE SORTED ON SITE OR COMINGLED. CALCULATIONS CAN BE DONE BY WEIGHT OR VOLUME, BUT MUST BE CONSISTENT THROUGHOUT.

MR 2.2 (1 POINT IN ADDITION TO MR 2.1)

RECYCLE AND SALVAGE AN ADDITIONAL 25% BEYOND MR 2.1 (75% TOTAL) OF NON HAZARDOUS CONSTRUCTION AND DEMOLITION DEBRIS.

HOW VITRITURF CAN CONTRIBUTE:

ALL OVERAGES CAN BE PACKAGED AND SHIPPED BACK AT THE OWNER'S EXPENSE TO HANOVER SPECIALTIES INC. IN HAUPPAUGE, NEW YORK.

POTENTIAL STRATEGIES:

ESTABLISH GOALS AND DIVERSION FROM DISPOSAL IN LANDFILLS AND INCINERATORS AND ADOPT A CONSTRUCTION WASTE MANAGEMENT PLAN TO ACHIEVE THESE GOALS. CONSIDER RECYCLING CARDBOARD, METAL, BRICK, RUBBER, ACOUSTICAL TILE, CONCRETE, PLASTIC, CLEAN WOOD, GLASS, GYPSUM WALLBOARD, CARPET AND INSULATION. DESIGNATE A SPECIFIC AREA ON THE CONSTRUCTION SITE FOR SEGREGATED OR COMINGLED COLLECTION OF RECYCLABLE MATERIALS, AND TRACK RECYCLING EFFORTS THROUGH THE CONSTRUCTION PROCESS.



LEED-NC: MATERIALS AND RESOURCES

RECYCLED CONTENT

DEFINITION OF LEED-NC CREDITS MR 4.1 & MR 4.2

MR 4.1 (1 POINT)

USE MATERIALS WITH RECYCLED CONTENT SUCH THAT THE SUM OF THE POST CONSUMER RECYCLED CONTENT PLUS ONE HALF (THE VALUE OF) THE PRE CONSUMER CONTENT CONSTITUTES AT LEAST 10% OF THE TOTAL VALUE OF THE MATERIALS IN THE PROJECT.

THE VALUE OF THE RECYCLED CONTENT PORTION OF A MATERIAL OR FURNISHING SHALL BE DETERMINED BY DIVIDING THE WEIGHT OF ALL MATERIAL IN THE ITEM, THEN MULTIPLYING THE RESULT PERCENTAGE BY THE TOTAL VALUE OF THE ITEM.

MR 4.2 (1 POINT IN ADDITION TO MR 4.1)

USE MATERIALS WITH RECYCLED CONTENT SUCH THAT THE SUM OF THE POST CONSUMER RECYCLED CONTENT PLUS ON HALF (THE VALUE OF) THE PRE CONSUMER CONTENT CONSTITUTES AT LEAST 20% OF THE TOTAL VALUE OF THE MATERIALS IN THE PROJECT.

HOW VITRITURF CAN CONTRIBUTE:

THE VITRITURF SYSTEMS ARE COMPRISED OF SHREDDED AND CLEANED SBR TIRE RUBBER AND OTHER RECYCLED RUBBER PARTICLES CONSTITUTING 100% POST CONSUMER WASTE.

RECYCLED CONTENT IS DEFINED IN ACCORDANCE WITH THE INTERNATIONAL ORGANIZATION FOR STANDARDIZATION DOCUMENT, ISO 14021. ENVIRONMENTAL LABELS AND DECLARATIONS:

POST CONSUMER MATERIAL: WASTE MATERIALS DIVERTED FROM THE WASTE STREAM AFTER CONSUMER OR COMMERCIAL USE.

PRE CONSUMER MATERIAL: MATERIALS DIVERTED FROM THE WASTE STREAM DURING THE MANUFACTURING PROCESS. EXCLUDED IS REGRIND, REWORK OR SCRAP.

POTENTIAL STRATEGIES:

ESTABLISH A PROJECT GOAL FOR RECYCLED CONTENT MATERIALS AND IDENTIFY MATERIAL SUPPLIERS THAT CAN ACHIEVE THIS GOAL. DURING CONSTRUCTION, ENSURE THAT THE SPECIFIED RECYCLED CONTENT MATERIALS ARE INSTALLED AND QUANTIFY THE TOTAL PERCENTAGE OF RECYLCED CONTENT INSTALLED.



LEED-NC: MATERIALS AND RESOURCES

LOCAL/REGIONAL MATERIALS

DEFINITION OF LEED-NC CREDITS MR 5.1 & 5.2

MR 5.1 (1 POINT)

USE BUILDING MATERIALS OR PRODUCTS THAT HAVE BEEN EXTRACTED, HARVESTED OR RECOVERED, AS WELL AS MANUFACTURED WITHIN 500 MILES OF THE PROJECT SITE FOR A MINIMUM OF 10% (BASED ON COST) OF THE TOTAL MATERIAL VALUE. IF ONLY A FRACTION OF A PRODUCT OR MATERIAL IS EXTRACTED/HARVESTED/RECOVERED AND MANUFACTURED LOCALLY, THEN ONLY THAT PERCENTAGE (BY WEIGHT) SHALL CONTRIBUTE TO THE REGIONAL VALUE.

MR 5.2 (1 POINT IN ADDITION TO MR 5.1)

SAME AS ABOVE BUT WITH A MINIMUM OF 20% OF THE TOTAL MATERIAL VALUE.

HOW VITRITURF CAN CONTRIBUTE:

THE VITRITURF SYSTEMS ARE PRODUCED IN HAUPPAUGE, NY. OUR SYSTEMS ARE INSTALLED ON SITE. WE ALSO SHIP OUR MANUFACTURED MATERIALS FROM SOUTH CAROLINA, ILLINOIS AND NORTHERN CALIFORNIA.

POTENTIAL STRATEGIES:

ESTABLISH A PROJECT GOAL FOR LOCALLY SOURCED MATERIALS AND IDENTIFY MATERIALS AND MATERIAL SUPPLIERS THAT CAN ACHIEVE THIS GOAL. DURING CONSTRUCTION, ENSURE THAT THE SPECIFIED LOCAL MATERIALS ARE INSTALLED AND QUANTIFY THE TOTAL PERCENTAGE OF LOCAL MATERIALS INSTALLED.





LEED-NC: INDOOR ENVIRONMENTAL QUALITY *LOW-EMITTING MATERIALS*

DEFINITION OF LEED-NC CREDIT EQ 4.1

EQ 4.1 (1 POINT)

ADHESIVES AND SEALANTS MUST BE LOWER THAN THE CURRENT VOC CONTENT LIMITS OF SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE #1168.

HOW VITRITURF CAN CONTRIBUTE:

VITRITURF BINDER, THE ADHESIVE UTILIZED IN THE VITRITURF SYSTEMS IS A LOW-VOC, ONE COMPONENT MOISTURE CURED POLYURETHANE. THE VOC FOR THE VITRITURF BINDER IS 0.0 (LBS/GAL.) SCAQMD RULE #1168 REQUIRES A VOC OF LESS THAN 0.6.

POTENTIAL STRATEGIES:

SPECIFY LOW-VOC MATERIALS IN CONSTRUCTION DOCUMENTS. ENSURE THAT VOC LIMITS ARE CLEARLY STATED IN EACH SECTION WHERE ADHESIVES AND SEALANTS ARE USED.



KEY DIFFERENCES BETWEEN LEED-NC, LEED-CI & LEED-EB

IN NOVEMBER 2004, THE USGBC RELEASED TWO ADDITIONAL RATING SYSTEMS (LEED-CI AND LEED-EB) TO ACCOMPANY LEED-NC. ALL THREE PROGRAMS ARE PART OF A COMPREHENSIVE SUITE OF LEED GREEN BUILDING RATING TOOLS THE USGBC HAS DEVELOPED TO PROMOTE GREEN DESIGN, CONSTRUCTION AND OPERATIONS PRACTICES IN BUILDINGS NATIONWIDE.

LEED FOR COMMERCIAL INTERIORS (LEED-CI) ADDRESSES THE SPECIFICS OF TENANT SPACES IN OFFICE, RETAIL AND INSTITUTIONAL BUILDINGS.

LEED FOR EXISTING BUILDINGS (LEED-EB) ADDRESSES THE SUSTAINABLE OPERATION OF EXISTING BUILDINGS, AND COVERS BUILDING OPERATIONS AND SYSTEMS UPGRADES IN EXISTING BUILDINGS WHERE THE MAJORITY OF INTERIOR OR EXTERIOR SURFACES REMAIN THE UNCHANGED.

LEED-NC

MATERIALS AND RESOURCES

MR 2: 1 POINT IF 50% OF CONSTRUCTION DEBRIS IS DIVERTED FROM LANDFILLS; 2 POINTS FOR 75%

MR 4: 1 POINT IF 10% OF ALL MATERIALS CONTAIN RECYCLED CONTENT; 2 POINTS FOR 20%

MR 5: 1 POINT FOR USING 10% OF THE MATERIALS THAT ARE EXTRACTED, HARVESTED OR RECOVERED, AS WELL AS MANUFACTURED WITHIN 500 MILES OF PROJECT SITE; 2 POINTS BY 20%

LEED-CI

MR 2: SAME AS NC

MR 4: SAME AS NC

MR 5.1: 1 POINT FOR USING 20% OF BUILDING MATERIALS THAT ARE MANUFACTURED WITHIN A 500 MILE RADIUS.

MR 5.2: 1 ADDITIONAL POINT BY USING 10% OF LOCALLY MANUFACTURED MATERIALS THAT ARE EXTRACTED OR HARVESTED WITHIN A 500 MILE RADIUS.

LEED-EB

MRC2: OFFERS POINTS FOR GREEN PURCHASING, INCLUDING BUILDING MATERIALS, AT A RATE OF 1 POINT FOR EACH 10% OF CONFIRMING PURCHASES. POINTS MAY BE EARNED BY SPECIFYING VITRITURF SYSTEMS THROUGH THE FOLLOWING CRITERIA:

MATERIALS CONTAIN AT LEAST 10% POST CONSUMER OR 20% PRE CONSUMER MATERIAL.

CONTAINS AT LEAST 50% MATERIALS HARVESTED AND PROCESSED OR EXTRACTED AND PROCESSED WITHIN 500 MILES OF THE PROJECT.

INDOOR ENVIRONMENTAL QUALITY

EQ 4.1: 1 POINT FOR USING ADHESIVES AND SEALANTS THAT MEET SCAQMD.

EQ 4.1: SAME AS NC

MRC3: PROVIDES UP TO 2 POINTS FOR USING LOW-EMITTING MATERIALS. ONE POINT MAY BE OBTAINED FOR EACH 45% OF ANNUAL PURCHASES CALCULATED ON A DOLLAR VALUE THAT CONFORM TO THE SAME CATEGORIES AS NC.